

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An optical writing system, comprising:

at least two laser diodes;

a polygonal mirror;

a first correction mechanism configured to

receive a first external parameter,

scan data of two laser diodes by one scanning movement with said polygonal mirror, and

correct, based on the first external parameter, a dot forming position of a terminating edge in a main scanning direction by shifting arbitrarily a phase of a picture element clock; and

a second correction mechanism configured to

receive a second external parameter, and

correct, based on the second external parameter, an amount of deviation in a data writing position along a vertical scanning direction to be approximately one laser diode line width; ~~wherein~~

~~said first correction mechanism is configured to be started by a first mechanism exterior to said optical writing system.~~

Claim 2 (Currently Amended): The optical writing system according to claim 1, wherein:

~~said second correction mechanism is configured to be started by a second mechanism exterior to said optical writing system~~ start to correct the amount of deviation based on the second external parameter.

Claim 3 (Currently Amended): The optical writing system according to claim [[2]] 1, wherein said second correction mechanism is configured to ~~be stopped by said second mechanism exterior to said optical writing system~~ stop correcting the amount of deviation based on the second external parameter.

Claim 4 (Currently Amended): The optical writing system according to claim [[2]] 1, wherein said first correction mechanism and said second correction mechanism are configured to be controlled separately from each other.

Claim 5 (Currently Amended): The optical writing system according to claim 1, wherein said first correction mechanism is configured to ~~be stopped by said first mechanism exterior to said optical writing system~~ start to correct the dot forming position based on the first external parameter.

Claim 6 (Currently Amended): The optical writing system according to claim 1, wherein said ~~operation of shifting~~ first correction mechanism is further configured to arbitrarily [[a]] shift the phase of [[a]] the picture element clock ~~is carried out~~ based on a scaling error factor of said at least two laser diodes.

Claim 7 (Currently Amended): The optical writing system according to claim 6, wherein the first external parameter includes the scaling error factor ~~is selectively input through an external input operation mechanism.~~

Claim 8 (Currently Amended): [[An]] The optical writing system, comprising:

~~at least two laser diodes;~~  
~~a polygonal mirror;~~  
~~a first correction mechanism configured to~~  
~~scan data of said at least two laser diodes by one scanning movement with said~~  
~~polygonal mirror, and~~  
~~correct a dot forming position for a terminating edge in a main scanning~~  
~~direction by an operation of shifting arbitrarily a phase of picture element clocks; and~~  
~~a second correction mechanism configured to correct an amount of deviation in data~~  
~~writing position along a vertical scanning direction to be at least approximately one laser~~  
~~diode line width; wherein~~  
~~said second correction mechanism is configured to be initiated by an external~~  
~~mechanism according to claim 1, wherein said first correction mechanism is configured to~~  
~~stop correcting based on the first external parameter.~~

Claim 9 (Canceled).

Claim 10 (Currently Amended): The optical writing system according to claim [[8]]  
1, wherein said second correction mechanism is further configured to ~~have an operational~~  
~~mode set by said external mechanism~~ receive the second external parameter that includes  
information indicating that a type of a document is one of a character document, a  
photography document, a mixed character and photography document, and a non-character  
and non-photography document.

Claim 11 (Currently Amended): The optical writing system according to claim 10, wherein ~~said type of original document is selected from the group comprising a character type, photography type, and a mixture of character and photography type, and wherein,~~  
if ~~said type of original document is said character type,~~ said second correction mechanism is further configured to enable correction of an amount of deviation in a data writing position in accordance with a first ~~selected~~ difficulty level when the information indicates that the type of document is a character document.

Claim 12 (Currently Amended): The optical writing system according to claim ~~[[11]]~~ 10, wherein ~~if said type of original document is said photography type,~~ said second correction mechanism is further configured to be placed in a state ~~comprising~~ including one of  
disabled, and  
enabled to correct an amount of deviation in data writing position in accordance with a second ~~selected~~ difficulty level when the information indicates that the type of document is a photography document.

Claim 13 (Currently Amended): The optical writing system according to claim ~~[[12]]~~ 10, wherein ~~if said type of original document said mixture of character and photography type,~~ said second correction mechanism is further configured to be placed in a state ~~comprising~~ including one of  
disabled, and  
enabled to correct an amount of deviation in data writing position in accordance with a third ~~selected~~ difficulty level when the information indicates that the type of document is a mixed character and photography document.

Claim 14 (Currently Amended): The optical writing system according to claim [[13]]  
10, wherein ~~if said type of original document is neither said character type, said photography~~  
~~type, and said mixture of character and photography type~~, said second correction mechanism  
is further configured to be placed in a state ~~comprising~~ including one of

disabled, and

enabled to correct an amount of deviation in data writing position in accordance with  
a fourth ~~selected~~ difficulty level when the information indicates that the type of document is a  
non-character and non-photography document.

Claim 15 (Currently Amended): An image forming apparatus, comprising:

an optical writing system ~~as recited in claim 1~~ comprising:

at least two laser diodes;

a polygonal mirror;

a first correction mechanism configured to

receive a first external parameter,

scan data of two laser diodes by one scanning movement with said polygonal  
mirror, and

correct, based on the first external parameter, a dot forming position of a  
terminating edge in a main scanning direction by shifting arbitrarily a phase of a  
picture element clock; and

a second correction mechanism configured to

receive a second external parameter, and

correct, based on the second external parameter, an amount of  
deviation in a data writing position along a vertical scanning direction to be  
approximately one laser diode line width; and

an image forming mechanism configured to form visible images on a sheet by visibly rendering electrostatic latent images written by said optical writing system.

Claim 16 (Currently Amended): The image forming apparatus according to claim 15, further comprising:

an operation input mechanism configured to selectively input ~~an operational mode~~ the first and second external parameters to said image forming apparatus, said ~~operational mode~~ first and second external parameters are configured to ~~call up~~ instruct said first correction mechanism and said second correction mechanism ~~from an exterior~~ , respectively, to subsequently be operated individually or in combination.

Claim 17 (Currently Amended): ~~[[An]]~~ The image forming apparatus, ~~comprising:~~  
~~an optical writing system as recited in claim 8; and~~  
~~an image forming mechanism configured to form visible images on a sheet by visibly rendering electrostatic latent images written by said optical writing system~~ according to claim 15, wherein said second correction mechanism is configured to start to correct the amount of deviation based on the second external parameter.

Claim 18 (Currently Amended): The image forming apparatus according to claim ~~[[17]]~~ 15, ~~further comprising:~~

~~an operation input mechanism configured to selectively input an operational mode to said image forming apparatus, said operational mode configured to call up said first correction mechanism and said second correction mechanism from an exterior to subsequently be operated individually or in combination~~ wherein said second correction

mechanism is configured to stop correcting the amount of deviation based on the second external parameter.

Claim 19 (Currently Amended): A method of correcting data written by an optical writing system, comprising the steps of:

receiving first and second external parameters;

scanning data of at least two laser diodes by one scanning movement with a polygonal mirror;

correcting, based on the first external parameter, a dot forming position of a terminating edge in a main scanning direction by shifting arbitrarily a phase of a picture element clock; [[and]]

correcting, based on the second external parameter, an amount of deviation in a data writing position along a vertical scanning direction to be approximately one line width; and

forming an image, wherein if an image to be formed is ~~not~~ mono-color, said ~~step~~ steps of correcting a dot forming position ~~occurs after said step of correcting and~~ an amount of deviation are not performed.

Claim 20 (Currently Amended): The method according to claim 19, wherein ~~the setting of said step of correcting an amount of deviation is carried out depending on a type of original document, said type of original document selected from the group comprising a character type, a photography type, and a mixture of character and photography type, wherein~~ the receiving first and second external parameters further comprises receiving an indication that a type of a document is one of a character document, a photography document, a mixed character and photography document, and a non-character and non-photography document; and

if said type of ~~original~~ said document is said character ~~[[type]]~~ document, enabling said ~~second correction mechanism is configured to enable correction~~ correcting of an amount of deviation in a data writing position in accordance with a first selected difficulty level;

if said type of ~~original~~ said document is said photography ~~[[type]]~~ document, placing said ~~second correction mechanism is configured to be~~ correcting an amount of deviation in a data writing position placed in a state ~~comprising~~ including one of

disabled, and

enabled to correct an amount of deviation in data writing position in accordance with a second selected difficulty level;

if said type of ~~original~~ document is said mixed ~~said mixture of~~ character and photography ~~[[type]]~~ document, placing said correcting an amount of deviation in a data writing position ~~second correction mechanism is configured to be placed~~ in a state ~~comprising~~ including one of

disabled, and

enabled to correct an amount of deviation in data writing position in accordance with a third selected difficulty level; and

if said type of ~~original~~ document is ~~neither said character type, said photography type, and said mixture of character and photography type~~ said non-character and non-photography document, placing said ~~second correction mechanism is configured to be placed~~ correcting an amount of deviation in a data writing position in a state ~~comprising~~ including one of

disabled, and

enabled to correct an amount of deviation in data writing position in accordance with a fourth selected difficulty level.

Claim 21 (Currently Amended): The method according to claim 19, wherein said shifting arbitrarily a phase of a picture element clock ~~comprises: shifting is~~ based on a scaling error factor of said at least two laser diodes.

Claim 22 (Currently Amended): A computer program product for use with an optical writing system, said computer program product ~~comprising: including~~ a computer usable medium having computer readable program code means embodied in said medium configured to cause a correction of data written by an optical writing system, ~~said computer readable program code means by performing steps~~ comprising:

~~first correction means for~~

~~scanning data of at least two laser diode means by one scanning movement with a polygonal mirror means, and~~

~~correcting a dot forming position for a terminating edge in a main scanning direction by shifting arbitrarily a phase of a picture element clock;~~

~~second correction means for~~

~~correcting an amount of deviation in a data writing position along a vertical scanning direction to be approximately one line width;~~

~~first means for externally calling up said first correction means; and~~

~~second means for externally calling up said second correction means~~

receiving first and second external parameters;

scanning data of at least two laser diodes by one scanning movement with a polygonal mirror;

correcting, based on the first external parameter, a dot forming position of a terminating edge in a main scanning direction by shifting arbitrarily a phase of a picture element clock;

correcting, based on the second external parameter, an amount of deviation in a data writing position along a vertical scanning direction to be approximately one line width; and  
forming an image, wherein if an image to be formed is mono-color, said steps of  
correcting a dot forming position and an amount of deviation are not performed.

Claim 23 (Canceled).

Claim 24 (Currently Amended): An optical writing system, comprising:

at least two laser ~~diode means~~ diodes;

a polygonal mirror ~~means~~;

a first correction ~~means~~ mechanism including

means for receiving a first external parameter,

means for scanning data of said two laser ~~diode means~~ diodes with said  
polygonal mirror ~~means~~, and

means for correcting, based on the first external parameter, a dot forming  
position of a terminating edge in a main scanning direction, including means for  
shifting arbitrarily a phase of a picture element clock; and

a second correction ~~means~~ mechanism including

means for receiving a second external parameter, and

means for correcting, based on the second external parameter, an amount of  
deviation in a data writing position along a vertical scanning direction to be  
approximately one laser diode line width; ~~wherein~~

~~said first correction means includes means for being started from a first control means~~  
~~exterior to said optical writing system.~~

Claim 25 (Currently Amended): The optical writing system according to claim 24, wherein said second correction ~~means~~ mechanism includes means for ~~being started from a second control means exterior to said optical writing system~~ starting to correct the amount of deviation based on the second external parameter.

Claim 26 (Currently Amended): The optical writing system according to claim [[25]] 24, wherein said second ~~control means includes means for stopping said second~~ correction ~~means from said second control means~~ mechanism includes means for stopping the correcting of the amount of deviation based on the second external parameter.

Claim 27 (Currently Amended): The optical writing system according to claim [[25]] 24, wherein said second correction ~~means~~ mechanism and said first correction ~~means~~ mechanism are configured to be controlled separately from each other.

Claim 28 (Currently Amended): The optical writing system according to claim [[27]] 24, wherein said first correction ~~means~~ mechanism includes means for ~~being stopped from said first control means~~ starting to correct the dot forming position based on the first external parameter.

Claim 29 (Original): The optical writing system according to claim 24, wherein said means for shifting arbitrarily a phase of a picture element clock includes means for shifting based on a scaling error factor of said at least two laser diode means.

Claim 30 (Currently Amended): The optical writing system according to claim 29, wherein the first parameter includes the scaling error factor is selectively input through an external input means.

Claim 31 (Currently Amended): ~~[[An]]~~ The optical writing system according to claim 24, comprising:

~~at least two laser diode means;~~

~~a polygonal mirror means;~~

~~a first correction means including~~

~~means for scanning data of the two laser diode means by one scanning movement with said polygonal mirror means, and~~

~~means for correcting a dot forming position for a terminating edge in a main scanning direction and including means for shifting arbitrarily a phase of a picture element clock; and~~

~~a second correction means including means for correcting an amount of deviation in data writing position along a vertical scanning direction to be at least approximately one laser diode line width; wherein~~

~~said second correction mean includes means for being started from a control means external to said optical writing system~~ said first correction mechanism includes means for stopping the correcting of the dot forming position based on the first external parameter.

Claim 32 (Canceled).

Claim 33 (Currently Amended): The optical writing system according to claim [[31]] 24, wherein said second correction ~~means includes means for having an operational mode set,~~  
~~in accordance with a type of original document, from said control means external to said~~  
~~optical writing system~~ mechanism further comprises means for receiving the second external  
parameter that includes information indicating that a type of a document is one of a character  
document, a photography document, a mixed character and photography document, and a  
non-character and non-photography document.

Claim 34 (Currently Amended): The optical writing system according to claim 33,  
wherein ~~said type of original document is selected from the group comprising a character~~  
~~type, photography type, and a mixture of character and photography type, and wherein,~~  
~~if said type of original document is said character type, said second correction means~~  
mechanism includes means for enabling correction of an amount of deviation in a data  
writing position in accordance with a first ~~selected~~ difficulty level when the information  
indicates that the type of document is a character document.

Claim 35 (Currently Amended): The optical writing system according to claim [[34]]  
33, wherein ~~if said type of original document is said photography type, said second correction~~  
~~means~~ mechanism includes means for being placed in a state ~~comprising~~ including one of  
disabled, and  
enabled to correct an amount of deviation in data writing position in accordance with  
a second ~~selected~~ difficulty level when the information indicates that the type of document is  
a photography document.

Claim 36 (Currently Amended): The optical writing system according to claim [[35]]  
33, wherein ~~if said type of original document said mixture of character and photography type,~~  
said second correction means mechanism includes means for being placed in a state  
~~comprising~~ including one of

disabled, and

enabled to correct an amount of deviation in data writing position in accordance with  
a third ~~selected~~ difficulty level when the information indicates that the type of document is a  
mixed character and photography document.

Claim 37 (Currently Amended): The optical writing system according to claim [[36]]  
37, wherein ~~if said type of original document is neither said character type, said photography~~  
~~type, and said mixture of character and photography type,~~ said second correction means  
mechanism includes means for being placed in a state ~~comprising~~ including one of

disabled, and

enabled to correct an amount of deviation in data writing position in accordance with  
a fourth ~~selected~~ difficulty level when the information indicates that the type of document is a  
non-character and non-photography document.

Claim 38 (New): The optical writing system according to claim 1, wherein the first  
and second external parameters are received from a mechanism exterior to said optical  
writing system.

Claim 39 (New): The image forming apparatus according to claim 15, wherein the  
first and second external parameters of said optical writing system are received from a  
mechanism exterior to said optical writing system.

Claim 40 (New): The method according to claim 19, wherein the receiving receives the first and second external parameters from a mechanism exterior to said optical writing system.

Claim 41 (New): The computer program product according to claim 22, wherein the receiving receives the first and second external parameters from a mechanism exterior to said optical writing system.

Claim 42 (New): The optical writing system according to claim 24, wherein the means for receiving the first external parameter and the means for receiving the second external parameter receive the first and second external parameters, respectively, from a mechanism exterior to said optical writing system.